

Title (en)
Mechanical counter for a metering apparatus

Title (de)
Dosierzähler für eine Dosiervorrichtung

Title (fr)
Compteur de dosage pour un dispositif de dosage

Publication
EP 1254678 A3 20030402 (EN)

Application
EP 02016552 A 19961219

Priority
• DE 19549033 A 19951228
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Abstract (en)
[origin: EP1254678A2] A metering apparatus for metering for example a medicament requires a device with which the number of metering portions is displayed. The known display devices however are not suitable for a metering apparatus having two housing portions which are rotatable relative to each other. The mechanical counter for a metering apparatus of that kind comprises at least one spindle with rotary locking, whose axis extends in parallel relationship with the axis of the metering apparatus and which is disposed in the region of the peripheral surface of the apparatus. The spindle is automatically driven by way of a transmission assembly when the metering apparatus is actuated. The number of metering portions already discharged and the number of metering portions permitted in total is quasi-continuously displayed by the mechanical counter. The transmission ratio of the transmission assembly can be designed to cover a wide range. The cursor serving for display purposes can be reset on the spindle. The permissible period of use of a metering apparatus which can be used for a plurality of supply containers can be reliably viewed.
<IMAGE>

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Citation (search report)
• [XA] WO 9321980 A1 19931111 - ASTRA AB [SE], et al
• [A] EP 0254391 A1 19880127 - GLAXO GROUP LTD [GB]
• [A] WO 9324167 A1 19931209 - NORTON HEALTHCARE LTD [GB], et al
• [A] US 3078011 A 19630219 - ALBERT SAFIANOFF
• [A] US 5349945 A 19940927 - WASS ANTHONY C L [GB], et al

Cited by
DE102006031626B3; EP1680065A4; US9968748B2

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DOCDB simple family (application)
EP 02016552 A 19961219; AR P960105918 A 19961227; AT 02016552 T 19961219; AT 96944610 T 19961219; AU 1303597 A 19961219; BG 10254098 A 19980615; BR 9612394 A 19961219; CA 2238760 A 19961219; CN 96199111 A 19961219; CO 96068270 A 19961227; CZ 204998 A 19961219; DE 19549033 A 19951228; DE 69626411 T 19961219; DE 69636628 T 19961219; DK 02016552 T 19961219; DK 96944610 T 19961219; EA 199800608 A 19961219; EE 9800210 A 19961219; EG 117896 A 19961224; EP 9605758 W 19961219; EP 96944610 A 19961219; ES 02016552 T 19961219; ES 96944610 T 19961219; HK 99100633 A 19990212; HR P960617 A 19961224; HU P9903725 A 19961219; IL 12457396 A 19961219; JP 52401297 A 19961219; KR 19980704485 A 19980615; MY PI9605431 A 19961223; NO 982992 A 19980626; NZ 32580196 A 19961219; PE 00095996 A 19961226; PL 32757196 A 19961219; PT 02016552 T 19961219; SA 97170606 A 19970215; SI 9630746 T 19961219; SK 89098 A 19961219; TR 9801234 T 19961219; TW 85116220 A 19961228; UA 98074087 A 19961219; US 9199998 A 19981031; UY 24397 A 19961211; YU 69896 A 19961225; ZA 9610851 A 19961223